Clinical Endocrinology

Edited by
A. Colao
J. Fagin
P. Fuller
J. A. Franklyn
P. M. Stewart

Associate Editors
J. S. Bevan
J. Newell-Price
J. Webster

Medical Statisticians
R. L. Holder
M. Kenward

Volume 59
2003

BLACKWELL SCIENCE
OXFORD EDINBURGH BOSTON MELBOURNE BERLIN TOKYO

9600 Garsington Road, Oxford OX4 2DQ
101 George Street, Edinburgh EH2 3ES
Commerce Place, 350 Main Street, Malden, MA 02148, USA
550 Swanston Street, Carlton, Victoria 3053, Australia
Blackwell Verlag, Kurfürstendamm 57, 10707 Berlin, Germany
Blackwell Science KK, MG Kodenmacho Building, 7–10 Kodenmacho Nihombashi, Chuo-ku, Tokyo 104, Japan

© 2003 Blackwell Publishing Ltd. Authorization to photocopy for internal or personal use or the internal or personal use of specific clients is granted by Blackwell Science Ltd for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of $15.00 per copy is paid directly to the CCC, 222 Rosewood Drive, Suite 910, Danvers, MA 01923, USA. This consent does not extend to other kinds of copying, such as copying for general distribution for advertising or promotional purposes, for creating new collective works or for resale. Special requests should be addressed to the Editor. 0300-0664/02 $15.00.

ISSN 0300-0664

Typeset by Graphicraft Limited, Hong Kong, China and printed in Europe by the Alden Group, Oxford, UK.

Clinical Endocrinology (2003) **59**, iii–viii

Contents

Volume 59, Number 1, July 2003

Reviews

1 The genetics of autoimmune endocrine disease: K. F. TAIT AND S. C. L. GOUGH

12 Growth hormone therapy for syndromic disorders: C. J. H. KELNAR

Commentaries

22 Vitamin D deficiency in the 21st century: an unnecessary pandemic?: W. E. PLEHWE

25 Physiological but not pharmacological growth hormone tests predict adult height: Z. ZADIK

Original Articles

27 Growth hormone secretory pattern and response to treatment in children with short stature followed to adult height: G. RADETTI, F. BUZI, W. CASSAR, C. PAGANINI, E. STACUL AND M. MAGHNIE

34 Is ovarian and adrenal venous catheterization and sampling helpful in the investigation of hyperandrogenic women?: G. A. KALTSAS, J. J. MUKHERJEE, B. KOLA, A. M. ISIDORI, J. A. HANSON, J. E. DACIE, R. REZNEK, J. P. MONSON AND A. B. GROSSMAN

44 Role of protein binding in renal elimination of leptin: M. LANDT, P. A. LUDBROOK AND J. J. BILLADELLO

49 A novel specific bioassay for the determination of glucocorticoid bioavailability in human serum: H. VERMEER, B. I. HENDRIKS-STEGEMAN, C. E. VAN DEN BRINK, P. T. VAN DER SAAG, B. VAN DER BURG, S. C. VAN BUUL-OFFERS AND M. JANSEN

56 Diagnostic reliability of a single IGF-I measurement in 237 adults with total anterior hypopituitarism and severe GH deficiency: G. AIMARETTI, G. CORNELI, R. BALDELLI, C. DI SOMMA, V. GASCO, C. DURANTE, L. AUSIELLO, S. ROVERE, S. GROTTOLI, G. TAMBURRANO AND E. GHIGO

62 Physiological testosterone replacement and arterial endothelial function in men: M. A. SADER, K. A. GRIFFITHS, M. R. SKILTON, S. M. WISHART, D. J. HANDELSMAN AND D. S. CELERMAJER

68 The relation between two polymorphisms in the glucocorticoid receptor gene and body mass index, blood pressure and cholesterol in obese patients: A. M. DI BLASIO, E. F. C. VAN ROSSUM, S. MAESTRINI, M. E. BERSELLI, M. TAGLIAFERRI, F. PODESTÀ, J. W. KOPER, A. LIUZZI AND S. W. J. LAMBERTS

75 Assessment of quality of life in adults receiving long-term growth hormone replacement compared to control subjects: I. A. MALIK, P. FOY, M. WALLYMAHMED, J. P. H. WILDING AND I. A. MACFARLANE

82 Growth without growth hormone: growth pattern and final height of five patients with idiopathic combined pituitary hormone deficiency: L. LAZAR, S. DAN AND M. PHILLIP

89 Increased fracture rates in Turner's syndrome: a nationwide questionnaire survey: C. H. GRAVHOLT, P. VESTERGAARD, A. P. HERMANN, L. MOSEKILDE, K. BRIXEN AND J. S. CHRISTIANSEN

97 Relationship between leptin levels and bone mineral density in the elderly: E. ZOICO, M. ZAMBONI, S. ADAMI, R. VETTOR, G. MAZZALI, P. TOSONI, L. BISSOLI AND O. BOSELLO

104 Interleukin-2 given to asymptomatic HIV-infected individuals leads to an exaggerated response of the pituitary gland to the action of CRH: O. WITZKE, T. WINTERHAGEN, A. KRIBBEN, T. PHILIPP, K. MANN AND W. REINHARDT

110 Left ventricular mass index and ventricular septum thickness are associated with serum dehydroepiandrosterone-sulphate levels in hypertensive women: M. SZATHMÁRI, A. TRESZL AND B. VÁSÁRHELYI

115 Characterization of the intracellular mechanisms mediating somatostatin and lanreotide inhibition of DNA synthesis and growth hormone release from dispersed human GH-secreting pituitary adenoma cells *in vitro*: T. FLORIO, S. THELLUNG, A. CORSARO, L. BOCCA, S. ARENA, A. PATTAROZZI, V. VILLA, A. MASSA, F. DIANA, D. SCHETTINI, F. BARBIERI, J. L. RAVETTI, R. SPAZIANTE, M. GIUSTI AND G. SCHETTINI

129 Multiple endocrine neoplasia type 1 (MEN1): genetic and clinical analysis in the Southern Chinese: A. W. K. TSO, R. RONG, C. Y. LO, K. C. B. TAN, S. C. TIU, N. M. S. WAT, J. Y. XU, A. VILLABLANCA, C. LARSSON, B. T. TEH AND K. S. L. LAM

136 The effect of cryptorchidism on inhibin B in a subfertile population: C. A. DE GOUVEIA BRAZAO, F. H. PIERIK, Y. ERENPREISS, F. H. DE JONG, G. R. DOHLE AND R. F. A. WEBER

142 **Letters to the Editors**

Author's Declaration

Instructions for authors

Volume 59, Number 2, August 2003

Review

145 Recent concerns surrounding HRT: M. ARMITAGE, J. NOONEY AND S. EVANS

Original Articles

156 Frequent association between MEN 2A and cutaneous lichen amyloidosis: U. VERGA, L. FUGAZZOLA, S. CAMBIAGHI, C. PRITELLI, E. ALESSI, D. CORTELAZZI, E. GANGI AND P. BECK-PECCOZ

162 Musculoskeletal manifestations in patients with thyroid disease: M. CAKIR, N. SAMANCI, N. BALCI AND M. K. BALCI

168 The effect of pegvisomant-induced serum IGF-I normalization on serum leptin levels in patients with acromegaly: C. PARKINSON, A. J. WHATMORE, A. P. YATES, W. M. DRAKE, G. BRABANT, P. E. CLAYTON AND P. J. TRAINER

175 Variants in the aromatase gene and on the Y-chromosome are not associated with adult height or insulin resistance in a UK population: M. N. WEEDON, M. TURNER, B. KNIGHT, P. CLARK, A. T. HATTERSLEY AND T. M. FRAYLING

180 Mutational analyses of RB and BRCA2 as candidate tumour suppressor genes in parathyroid carcinoma: T. M. SHATTUCK, T. S. KIM, J. COSTA, D. W. YANDELL, Y. IMANISHI, N. PALANISAMY, R. D. GAZ, D. SHOBACK, O. H. CLARK, J. M. MONCHIK, M. E. WIERMAN, A. HOLLENBERG, K. TOJO, R. S. K. CHAGANTI AND A. ARNOLD

190 Thyroglobulin epitope recognition in a post iodine-supplemented Sri Lankan population: O. E. OKOSIEME, L. D. K. E. PREMAWARDHANA, A. JAYASINGHE, D. G. H. DE SILVA, P. P. A. SMYTH, A. B. PARKES, P. J. LEJEUNE, J. RUF AND J. H. LAZARUS

198 Partial iodide organification defect caused by a novel mutation of the thyroid peroxidase gene in three siblings: T. KOTANI, K. UMEKI, J. KAWANO, T. SUGANUMA, A. HISHINUMA, T. IEIRI AND S. HARADA

207 Detection and localization of chemokine gene expression in autoimmune thyroid disease: E. H. KEMP, R. A. METCALFE, K. A. SMITH, M. N. WOODROOFE, P. F. WATSON AND A. P. WEETMAN

214 The pituitary–testicular axis in Klinefelter's syndrome and in oligo-azoospermic patients with and without deletions of the Y chromosome long arm: P. A. TOMASI, R. OATES, L. BROWN, G. DELITALA AND D. C. PAGE

223 Grey-scale analysis allows a quantitative evaluation of thyroid echogenicity in the patients with Hashimoto's thyroiditis: G. MAZZIOTTI, F. SORVILLO, S. IORIO, A. CARBONE, A. ROMEO, M. PISCOPO, S. CAPUANO, E. CAPUANO, G. AMATO AND C. CARELLA

230 Recombinant human TSH testing is a valuable tool for differential diagnosis of congenital hypothyroidism during l-thyroxine replacement: L. FUGAZZOLA, L. PERSANI, D. MANNAVOLA, E. RESCHINI, G. VANNUCCHI, G. WEBER AND P. BECK-PECCOZ

237 The N363S polymorphism in the glucocorticoid receptor gene is associated with overweight in subjects with type 2 diabetes mellitus: R. ROUSSEL, A. F. REIS, D. DUBOIS-LAFORGUE, C. BELLANNÉ-CHANTELOT, J. TIMSIT AND G. VELHO

242 Increased Interleukin-6 levels in pituitary-deficient patients are independently related to their carotid intima-media thickness: M. LEONSSON, J. HULTHE, G. JOHANNSSON, O. WIKLUND, J. WIKSTRAND, B. Å. BENGTSSON AND J. OSCARSSON

251 The effectiveness of arginine + GHRH test compared with GHRH + GHRP-6 test in diagnosing growth hormone deficiency in adults: V. POPOVIC, S. PEKIC, M. DOKNIC, D. MICIC, S. DAMJANOVIC, M. ZARKOVIC, G. AIMARETTI, G. CORNELI, E. GHIGO, C. DEIGUEZ AND F. F. CASANUEVA

258 The effect of body weight and weight loss on thyroid volume and function in obese women: R. SARI, M. K. BALCI, H. ALTUNBAS AND U. KARAYALCIN

263 **Letters to the Editors**

266 **Erratum**

Author's Declaration

Instructions for authors

Volume 59, Number 3, September 2003

Review

267 PPARγ and metabolism: insights from the study of human genetic variants: M. GURNELL

Commentaries

278 Tall stories: the devilish detail of genetic association studies: J. A. ELLIS AND S. B. HARRAP

280 Thyroid hormones and fetal brain development: M. D. KILBY

Original Articles

282 Maternal hypothyroxinaemia during early pregnancy and subsequent child development: a 3-year follow-up study: V. J. POP, E. P. BROUWERS, H. L. VADER, T. VULSMA, A. L. VAN BAAR AND J. J. DE VIJLDER

289 Insulin resistance and β-cell dysfunction in normoglycaemic European women with a history of gestational diabetes: E. KOUSTA, N. J. LAWRENCE, I. F. GODSLAND, A. PENNY, V. ANYAOKU, B. A. MILLAUER, E. CELA, D. G. JOHNSTON, S. ROBINSON AND M. I. MCCARTHY

298 Epidemiological survey of thyroid volume and iodine intake in schoolchildren, postpartum women and neonates living in Ulaan Baatar: Y. FUSE, T. IGARI, C. YAMADA, S. SAKANO, H. ITO, T. UMENAI AND M. IRIE

307 Usefulness of the free α-subunit to diagnose hypogonadotropic hypogonadism: A. S. MAINIERI AND R. H. ELNECAVE

314 Alprazolam (a benzodiazepine activating GABA receptor) reduces the neuroendocrine responses to insulin-induced hypoglycaemia in humans: R. GIORDANO, S. GROTTOLI, P. BROSSA, M. PELLEGRINO, S. DESTEFANIS, F. LANFRANCO, L. GIANOTTI, E. GHIGO AND E. ARVAT

321 Peripheral parameters of oxidative stress in Graves' disease: the effects of methimazole and 131 iodine treatments: M. ABALOVICH, S. LLESUY, S. GUTIERREZ AND M. REPETTO

328 Reduced expression of the growth hormone and type 1 insulin-like growth factor receptors in human somatotroph tumours and an analysis of possible mutations of the growth hormone receptor: B. KOLA, M. KORBONITS, S. DIAZ-CANO, G. KALTSAS, D. G. MORRIS, S. JORDAN, L. METHERELL, M. POWELL, S. CZIRJÁK, G. ARNALDI, S. BUSTIN, M. BOSCARO, F. MANTERO AND A. B. GROSSMAN

339 Clinical and radiological features of patients with macroprolactinaemia: M. W. J. STRACHAN, W. L. TEOH, A. C. DON-WAUCHOPE, J. SETH, M. STODDART AND G. J. BECKETT

347 Changes in both size and cytological features of thyroid nodule after levothyroxine treatment: F. VERMIGLIO, V. P. LO PRESTI, M. A. VIOLI, M. MOLETI, M. G. CASTAGNA, M. D. FINOCCHIARO, F. MATTINA, M. MANDOLFINO, G. ZIMBARO AND F. TRIMARCHI

354 Increased expression of endothelin-1 and its mitogenic receptor ET_A in human papillary thyroid carcinoma: J. E. DONCKIER, L. MICHEL, R. VAN BENEDEN, M. DELOS AND X. HAVAUX

361 Accuracy of ultrasonography to establish the diagnosis and aetiology of permanent primary congenital hypothyroidism: E. KREISNER, E. CAMARGO-NETO, C. R. MAIA AND J. L. GROSS

366 An investigation of fetal, postnatal and childhood growth with insulin-like growth factor I and binding protein 3 in adulthood: Y. BEN-SHLOMO, J. HOLLY, A. MCCARTHY, P. SAVAGE, D. DAVIES, D. GUNNELL AND G. D. SMITH

374 Obstructive sleep apnoea syndrome impairs insulin sensitivity independently of anthropometric variables: F. TASSONE, F. LANFRANCO, L. GIANOTTI, S. PIVETTI, F. NAVONE, R. ROSSETTO, S. GROTTOLI, V. GAI, E. GHIGO AND M. MACCARIO

380 The impact of different glucocorticoid replacement schedules on bone turnover and insulin sensitivity in patients with adrenal insufficiency: A. M. SULIMAN, R. FREANEY, T. P. SMITH, Y. MCBRINN, B. MURRAY AND T. J. MCKENNA

388 Relationship between longitudinal behaviour of some markers of eye autoimmunity and changes in ocular findings in patients with Graves' ophthalmopathy receiving corticosteroid therapy: A. DE BELLIS, A. BIZZARRO, M. CONTE, C. CORONELLA, S. SOLIMENO, S. PERRINO, D. SANSONE, M. GUAGLIONE, J. R. WALL AND A. BELLASTELLA

396 Risk factors for and prevalence of thyroid disorders in a cross-sectional study among healthy female relatives of patients with autoimmune thyroid disease: T. G. A. STRIEDER, M. F. PRUMMEL, J. G. P. TIJSSEN, E. ENDERT AND W. M. WIERSINGA

402 **Letters to the Editors**

407 **Erratum**

Author's Declaration

Instructions for authors

Volume 59, Number 4, October 2003

Review

409 Endocrine intervention for transsexuals: A. LEVY, A. CROWN AND R. REID

Commentaries

419 Extracellular calcium-sensing receptor dysfunction is associated with two new phenotypes: J. A. SAYER AND S. H. S. PEARCE

422 Prevalence and role of a raised aldosterone to renin ratio in the diagnosis of primary aldosteronism: a debate on the scientific logic of the use of the ratio in practice: P. L. PADFIELD

427 Primary aldosteronism, diagnosed by the aldosterone to renin ratio, is a common cause of hypertension: P. O. LIM AND T. M. MACDONALD

Original articles

431 Effect of acute reduction of free fatty acids by acipimox on growth hormone-releasing hormone-induced GH secretion in type 1 diabetic patients: P. ALVAREZ, L. ISIDRO, R. PEINÓ, A. LEAL-CERRO, F. F. CASANUEVA, C. DIEGUEZ AND F. CORDIDO

437 A functional site on the human TSH receptor: a potential therapeutic target in Graves' disease: A. P. JOHNSTONE, J. C. CRIDLAND, C. R. DA COSTA, S. S. NUSSEY AND P. S. SHEPHERD

442 Association of two apolipoprotein A-I gene *Msp*I polymorphisms with high density lipoprotein (HDL)-cholesterol levels and indices of obesity in selected healthy Chinese subjects and in patients with early-onset type 2 diabetes: Y. Q. MA, G. N. THOMAS, M. C. Y. NG, J. A. J. H. CRITCHLEY, C. S. COCKRAM, J. C. N. CHAN AND B. TOMLINSON

450 Neuromuscular dysfunction in adult growth hormone deficiency: S. M. WEBB, I. DE ANDRÉS-AGUAYO, R. ROJAS-GARCÍA, E. ORTEGA, E. GALLARDO, A. MESTRÓN, C. SERRANO-MUNUERA, R. CASAMITJANA AND I. ILLA

459 Effect of dehydroepiandrosterone supplementation on fatty acid and hormone levels in patients with X-linked adrenoleucodystrophy: J. ASSIES, E. B. HAVERKORT, R. LIEVERSE AND P. VREKEN
467 Psychological effects of withdrawal of growth hormone therapy from adults with growth hormone deficiency: C. V. MCMILLAN, C. BRADLEY, J. GIBNEY, M. L. HEALY, D. L. RUSSELL-JONES AND P. H. SÖNKSEN
476 The glutamine 27 glutamic acid polymorphism of the β_2-adrenoceptor gene is associated with abdominal obesity and greater risk of impaired glucose tolerance in men but not in women: a population-based study in Spain: J. L. GONZÁLEZ SÁNCHEZ, A. M. PROENZA, M. T. MARTÍNEZ LARRAD, J. M. RAMIS, C. FERNÁNDEZ PÉREZ, A. PALOU AND M. SERRANO RÍOS
482 The gender differences in growth hormone-binding protein and leptin persist in 80-year-old men and women and is not caused by sex hormones: B. BÜLOW, B. AHRÉN, S. FISKER, O. DEHLIN, B. HAGBERG, E. JENSEN, T. SVENSSON, G. SAMUELSSON AND E. M. ERFURTH
487 Bone density and body composition in children with growth hormone insensitivity syndrome receiving recombinant IGF-I: N. J. SHAW, N. C. FRASER, S. ROSE, N. J. CRABTREE AND C. M. BOIVIN
492 Glucose homeostasis in acromegaly: effects of long-acting somatostatin analogues treatment: R. BALDELLI, C. BATTISTA, F. LEONETTI, M.-R. GHIGGI, M.-C. RIBAUDO, A. PAOLONI, E. D'AMICO, E. FERRETTI, R. BARATTA, A. LIUZZI, V. TRISCHITTA AND G. TAMBURRANO
500 Congenital hypothyroidism due to a new deletion in the sodium/iodide symporter protein: M. TONACCHERA, P. AGRETTI, G. DE MARCO, R. ELISEI, A. PERRI, E. AMBROGINI, M. DE SERVI, C. CECCARELLI, P. VIACAVA, S. REFETOFF, C. PANUNZI, M. L. M. BITTI, P. VITTI, L. CHIOVATO AND A. PINCHERA
507 Circulating resistin levels in essential hypertension: M. FURUHASHI, N. URA, K. HIGASHIURA, H. MURAKAMI AND K. SHIMAMOTO
511 Progressive decline of vasopressin secretion in familial autosomal dominant neurohypophyseal diabetes insipidus presenting a novel mutation in the vasopressin-neurophysin II gene: P. C. L. ELIAS, L. L. K. ELIAS, N. TORRES, A. C. MOREIRA, J. ANTUNES-RODRIGUES AND M. CASTRO
519 Interleukin-13 gene polymorphisms in patients with Graves' disease: T. BEDNARCZUK, G. PLACHA, K. JAZDZEWSKI, A. KURYLOWICZ, M. KLOZA, U. MAKOWSKA, Y. HIROMATSU AND J. NAUMAN
526 Suppression and recovery of LH secretion by a potent and selective GnRH-receptor antagonist peptide in healthy early follicular-phase women are mediated via selective control of LH secretory burst mass: L. GIANOTTI, J. D. VELDHUIS, S. DESTEFANIS, F. LANFRANCO, J. RAMUNNI, E. ARVAT, M. MARZETTO, F. BOUTIGNON, R. DEGHENGHI AND E. GHIGO
533 **Letters to the Editors**
537 **Book review**
Author's Declaration
Instructions for authors

Volume 59, Number 5, November 2003

Review
539 Update on genetic and clinical aspects of primary hyperparathyroidism: S. MIEDLICH, K. KROHN AND R. PASCHKE

Commentary
555 Fine-tuning of T lymphocytes in autoimmunity: genetic association of CTLA-4 variants and Graves' disease revisited: K. BADENHOOP AND C. SEIDL

Original articles
558 Effects of treatment with Sandostatin® LAR® on small dense LDL and remnant-like lipoproteins in patients with acromegaly: K. C. B. TAN, R. W. C. PANG, S. C. TIU AND K. S. L. LAM
565 SPECT/CT hybrid imaging with ^{111}In-pentetreotide in assessment of neuroendocrine tumours: Y. KRAUSZ, Z. KEIDAR, I. KOGAN, E. EVEN-SAPIR, R. BAR-SHALOM, A. ENGEL, R. RUBINSTEIN, J. SACHS, M. BOCHER, S. AGRANOVICZ, R. CHISIN AND O. ISRAEL
574 Eating pattern and the effect of oral glucose on ghrelin and insulin secretion in patients with anorexia nervosa: M. TANAKA, Y. TATEBE, T. NAKAHARA, D. YASUHARA, K.-I. SAGIYAMA, T. MURANAGA, H. UENO, M. NAKAZATO, S.-I. NOZOE AND T. NARUO
580 The TSH response to domperidone reflects the biological activity of prolactin in macroprolactinaemia and hyperprolactinaemia: L. P. PINTO, F. W. F. HANNA, L. M. EVANS, J. S. DAVIES, R. JOHN AND M. F. SCANLON
585 Identification of the *Bcl*I polymorphism in the glucocorticoid receptor gene: association with sensitivity to glucocorticoids *in vivo* and body mass index: E. F. C. VAN ROSSUM, J. W. KOPER, A. W. VAN DEN BELD, A. G. UITTERLINDEN, P. ARP, W. ESTER, J. A. M. J. L. JANSSEN, A. O. BRINKMANN, F. H. DE JONG, D. E. GROBBEE, H. A. P. POLS AND S. W. J. LAMBERTS
593 Prevalence of adrenal antibodies in Addison's disease among north Indian Caucasians: R. NIGAM, E. BHATIA, D. MIAO, L. YU, A. BROZZETTI, G. S. EISENBARTH AND A. FALORNI

599 Insulin gene VNTR genotype is associated with insulin sensitivity and secretion in infancy: R. A. BAZAES, C. J. PETRY, K. K. ONG, A. ÁVILA, D. B. DUNGER AND M. V. MERICQ

604 Impaired GH secretion to provocative stimuli in two families with hypocalciuric hypercalcaemia: E. CECCONI, F. BOGAZZI, F. CETANI, L. GRASSO, C. MARCOCCI, M. GENOVESI, M. PROCOPIO, M. GASPERI, A. PINCHERA, E. GHIGO AND E. MARTINO

607 Decrease in carotid intima-media thickness in hypothyroid patients after normalization of thyroid function: T. NAGASAKI, M. INABA, Y. HENMI, Y. KUMEDA, M. UEDA, H. TAHARA, S. SUGIGUCHI, S. FUJIWARA, M. EMOTO, E. ISHIMURA, N. ONODA, T. ISHIKAWA AND Y. NISHIZAWA

613 The effects of growth hormone deficiency and replacement on glucocorticoid exposure in hypopituitary patients on cortisone acetate and hydrocortisone replacement: F. M. SWORDS, P. V. CARROLL, J. KISALU, P. J. WOOD, N. F. TAYLOR AND J. P. MONSON

621 Serum concentrations of adipocytokines in patients with hyperthyroidism and hypothyroidism before and after control of thyroid function: P. IGLESIAS, P. A. FIDALGO, R. CODOCEO AND J. J. DÍEZ

630 Ghrelin mRNA and GH secretagogue receptor mRNA in human GH-producing pituitary adenomas is affected by mutations in the α subunit of G protein: K. KIM, N. SANNO, K. ARAI, K. TAKANO, J. YASUFUKU-TAKANO, A. TERAMOTO AND T. SHIBASAKI

637 Increased prevalence of sublinical brain perfusion abnormalities in patients with autoimmune thyroiditis: evidence of Hashimoto's encephalitis?: G. ZETTINIG, S. ASENBAUM, B. J. FUEGER, A. HOFMANN, M. DIEMLING, M. MITTLBOECK AND R. DUDCZAK

644 Chromogranin A as serum marker of pituitary adenomas: I.-L. GUSSI, J. YOUNG, E. BAUDIN, J. M. BIDART AND P. CHANSON

649 Ghrelin concentrations in healthy children and adolescents: A. J. WHATMORE, C. M. HALL, J. JONES, M. WESTWOOD AND P. E. CLAYTON

655 **Book reviews**

657 **Letters to the Editors**

658 **Errata**

Author's Declaration

Instructions for authors

Volume 59, Number 6, December 2003

659 **Editorial**

Review

660 Growth hormone, acromegaly, and heart failure: an intricate triangulation: L. SACCÀ, R. NAPOLI AND A. CITTADINI

Original articles

672 Residual goitre in the postiodization phase: iodine status, thiocyanate exposure and autoimmunity: R. K. MARWAHA, N. TANDON, N. GUPTA, A. K. KARAK, K. VERMA AND N. KOCHUPILLAI

682 Metabolic, inflammatory and haemostatic effects of a low-dose continuous combined HRT in women with type 2 diabetes: potentially safer with respect to vascular risk?: J. MCKENZIE, A. J. JAAP, S. GALLACHER, A. KELLY, L. CRAWFORD, I. A. GREER, A. RUMLEY, J. R. PETRIE, G. D. LOWE, K. PATERSON AND N. SATTAR

690 Modulation by progestogens of the effects of oestrogen on hepatic endocrine function in postmenopausal women: A. G. NUGENT, K.-C. LEUNG, D. SULLIVAN, A. T. REUTENS AND K. K. Y. HO

699 Increased IGF-I : IGFBP-3 ratio in patients with hepatocellular carcinoma: D. MATTERA, G. CAPUANO, A. COLAO, R. PIVONELLO, F. MANGUSO, A. PUZZIELLO AND L. D'AGOSTINO

707 Fine analysis of the short arm of chromosome 1 in sporadic and familial pheochromocytoma: G. OPOCHER, F. SCHIAVI, A. VETTORI, F. PAMPINELLA, L. VITIELLO, A. CALDERAN, B. VIANELLO, A. MURGIA, M. MARTELLA, A. TACCALITI, F. MANTERO AND M. L. MOSTACCIUOLO

716 Serum leptin levels in patients with premenstrual syndrome treated with GnRH analogues alone and in association with tibolone: G. A. TOMMASELLI, C. DI CARLO, G. BIFULCO, A. D. SPIEZIO SARDO, M. PELLICANO AND C. NAPPI

723 Vasoactive intestinal peptide (VIP): a new neuroendocrine marker of clinical progression in chronic heart failure?: P. LUCIA, S. CAIOLA, A. COPPOLA, L. L. MANETTI, E. MAROCCIA, A. M. BUONGIORNO AND C. DE MARTINIS

728 Genetic analysis of mitochondrial complex II subunits *SDHD*, *SDHB* and *SDHC* in paraganglioma and phaeochromocytoma susceptibility: D. ASTUTI, N. HART-HOLDEN, F. LATIF, F. LALLOO, G. C. BLACK, C. LIM, A. MORAN, A. B. GROSSMAN, S. V. HODGSON, A. FREEMONT, R. RAMSDEN, C. ENG, D. G. R. EVANS AND E. R. MAHER

734 Thyroid cancer immuno-therapy with retroviral and adenoviral vectors expressing granulocyte macrophage colony stimulating factor and interleukin-12 in a rat model: K. TANAKA, S. TOWATA, K. NAKAO, H. MIZUGUCHI, T. HAYAKAWA, M. NIWA, N. ISHII AND Y. NAGAYAMA

743 Acquired prolactin deficiency indicates severe hypopituitarism in patients with disease of the hypothalamic–pituitary axis: A. MUKHERJEE, R. D. MURRAY, B. COLUMB, H. K. GLEESON AND S. M. SHALET

749 The androgen receptor gene CAG polymorphism is associated with the severity of coronary artery disease in men: M. ALEVIZAKI, A. T. CIMPONERIU, M. GAROFALLAKI, H.-L. SARIKA, C. C. ALEVIZAKI, C. PAPAMICHAEL, G. PHILIPPOU, E. A. ANASTASIOU, J. P. LEKAKIS AND M. MAVRIKAKIS

756 Fasting insulin sensitivity and post-oral glucose hyperinsulinaemia related to cardiovascular risk factors in adolescents with precocious pubarche: N. POTAU, R. WILLIAMS, K. ONG, C. SÁNCHEZ-UFARTE, F. DE ZEGHER, L. IBÁÑEZ AND D. DUNGER

763 Reduced exercise capacity in untreated adults with primary growth hormone resistance (Laron syndrome): I. BEN-DOV, M. GAIDES, M. SCHEINOWITZ, R. WAGNER AND Z. LARON

768 Fibrous bodies are associated with lower GH production and decreased expression of E-cadherin in GH-producing pituitary adenomas: H. NISHIOKA, J. HARAOKA AND K. AKADA

773 Determinants of IGF-I status in a large cohort of growth hormone-deficient (GHD) subjects: the role of timing of onset of GHD: C. A. LISSETT, P. JÖNSSON, J. P. MONSON AND S. M. SHALET

779 GH treatment and its effect on bone mineral density, bone maturation and growth in short children born small for gestational age: 3-year results of a randomized, controlled GH trial: N. J. T. ARENDS, V. H. BOONSTRA, P. G. H. MULDER, R. J. H. ODINK, W. H. STOKVIS-BRANTSMA, C. RONGEN-WESTERLAKEN, J. C. MULDER, H. DELEMARRE-VAN DE WAAL, H. M. REESER, M. JANSEN, J. J. J. WAELKENS AND A. C. S. HOKKEN-KOELEGA

788 Acromegalic features in growth hormore (GH)-deficient patients after long-term GH therapy: L. R. CARVALHO, M. E. J. DE FARIA, M. G. FARAH OSORIO, V. ESTEFAN, A. A. LIMA JORGE, I. J. PRADO ARNHOLD AND B. B. MENDONCA

793 Octreoscan in patients with bronchial carcinoid tumours: D. GRANBERG, A. SUNDIN, E. T. JANSON, K. ÖBERG, B. SKOGSEID AND J.-E. WESTLIN

800 A dose–response study of salivary cortisol after dexamethasone suppression test in Cushing's disease and its potential use in the differential diagnosis of Cushing's syndrome: M. CASTRO, L. L. K. ELIAS, P. C. L. ELIAS AND A. C. MOREIRA

806 Recombinant hGH replacement therapy and the hypothalamus–pituitary–thyroid axis in children with GH deficiency: when should we be concerned about the occurrence of central hypothyroidism?: C. GIAVOLI, S. PORRETTI, E. FERRANTE, V. CAPPIELLO, C. L. RONCHI, P. TRAVAGLINI, P. EPAMINONDA, M. AROSIO AND P. BECK-PECCOZ

811 Prolonged psychological stress suppresses cortisol secretion: M. ŽARKOVIĆ, E. STEFANOVA, J. ĆIRIĆ, Z. PENEZIĆ, V. KOSTIĆ, M. ŠUMARAC-DUMANOVIĆ, D. MACUT, M. S. IVOVIĆ AND P. V. GLIGOROVIĆ

817 Variants of uncoupling protein-2 gene and obesity: interaction with peroxisome proliferator-activated receptorγ2: F. P. MANCINI, L. SABATINO, V. COLANTUONI, F. PASANISI, C. FINELLI, F. CONTALDO, M. MASULLI, G. RICCARDI AND O. VACCARO

823 **Letters to the Editors**

826 **Book reviews**

828 **Referees**

830 **Author Index**

841 **Subject Index**

Volume Contents

Author's Declaration

Instructions for authors